

73. CLIMATIC CHARACTERIZATION OF THE WHEAT STREAK MOSAIC VIRUS (WSMV) PATHOLOGY SYSTEM AND ITS VECTOR *Aceria tosichella* Keifer USING A GEOGRAPHICAL INFORMATION SYSTEM (GIS)

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In Argentina, the *Wheat streak mosaic virus* (WSMV) disease has been present since 2003, when it was detected for the first time in the districts of Marcos Juárez and Jesús María, province of Córdoba. Since then, the disease has been rapidly expanding. This study was undertaken for the purpose of characterizing through a geographical information system (GIS) the areas where the disease was detected up to the present. Data were used for 28 sites where virosis was detected during the 2003-2006 period. FloraMap 1.02 software was used to characterize the sites. Maximum and minimum altitudes recorded were 1280 and 30 m above sea level respectively. Maximum and minimum average ambient temperatures (AAT) were 27.9°C and 6.1°C respectively. Maximum and minimum average environmental pressure (AEP) was 239 mm and 2 mm respectively. All sites had a dry season lasting from 6 to 11 months. These results will contribute to an epidemiological study by providing data on climatic features.

74. EVALUATION OF SUSCEPTIBILITY TO WHEAT STREAK MOSAIC VIRUS (WSMV) IN ARTIFICIALLY PRODUCED INFECTIONS IN VARIOUS WHEAT CULTIVARS

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The *Wheat streak mosaic virus* (WSMV) disease causes significant crop losses in wheat producing areas. Its presence has been recorded in Argentina since the year 2003 and it has shown a rapid expansion up to now. We considered it important to use artificial infection to assess the amount of damage caused by the disease, so this became the purpose of the present study. Susceptibility to virosis was assessed in 4 wheat cultivars (ACA304, 801, P. Gaucho, P. Molinero). These were ranked for severity and serology. All four cultivars proved susceptible and, despite the lack of significant statistical differences, a diminution in yield of 37% and 11% and an incidence of 33% and 12% were observed in cv. P. Gaucho and cv. ACA 304 respectively. In the remaining cultivars no analysis was possible because the health control samples became infected also. The average grade of symptom severity (AGSS) was 1.25 and 1.20 in the Gaucho and ACA 304 cultivars respectively. Our studies of yield drop and susceptibility will continue in order to find a way to control the disease.

75. ANTIFUNGAL ACTIVITY OF TWO BACCHARIS SPECIES COLLECTED IN THE ARGENTINE PUNA

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The genus *Baccharis* (Asteraceae) includes approximately 96 species in Argentina. The species selected for the present study, *Baccharis incarum* and *B. boliviensis*, grow in extreme zones of low atmospheric pressure, wide temperature ranges and high solar radiation (Antofagasta de la Sierra, Province of Catamarca, Puna de Atacama, Argentina). These plants are popularly known as "lejía" (bleach) and are commonly used by the inhabitants to protect the stomach and liver, restore blood circulation, reduce inflammatory processes and cure ulcers, burns and skin wounds. The aim of the present work was to evaluate the antifungal potential of the aerial parts of both plant species against human pathogenic yeasts and micelial fungi.

Tinctures in 80% ethanol were prepared. Antifungal activity was evaluated by bioautography assay. Minimum fungicide concentration (MFC) was determined by the agar macrodilution method in accordance with CLSI recommendation against *Aspergillus* spp and *Candida albicans*. MFC values were 200 to 400 µg/ml for *Aspergillus* spp and *Candida albicans*.

76. ACTIVITY OF ORGANIC EXTRACTS FROM PUNA SPECIES OF *Fabiana* sp. (SOLANACEAE) AGAINST ANTIBIOTIC RESISTANT STRAINS

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Fabiana bryoides Phil., *Fabiana punensis* S.C.Arroyo, *Fabiana densa* J. Rémy, which grow in northwestern Argentina, are used as antiseptics in popular medicine. The purpose of the present study was to extract antimicrobial agents from their aerial parts with different solvent systems. The fractions were obtained by Soxhlet from dry plant material using hexane, chloroform, EtOAc and MeOH. Bioautography assays by dot blot (100 µg) against the resistant strains *S. aureus*, *E. faecalis*, *P. aeruginosa* and *E. coli* isolated from clinical samples were used. The active fraction (150 µg of each fraction) was developed in different solvent systems. Then bioautography assays were performed.

The fractions obtained with hexane, chloroform and AcOEt were more active than the MeOH fraction, especially against Gram (+) bacteria. The *F. punensis* ethyl acetate fraction had the widest activity spectrum. The results obtained justify the traditional use of these species.